(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 13 October 2005 (13.10.2005)

PCT

(10) International Publication Number WO 2005/094565 A1

(51) International Patent Classification⁷: A0 G06T 7/00

A01J 5/017,

(21) International Application Number:

PCT/SE2005/000427

(22) International Filing Date: 23 March 2005 (23.03.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0400820-7 30 March 2004 (30.03.2004) SE 0400819-9 30 March 2004 (30.03.2004) SE 0400821-5 30 March 2004 (30.03.2004) SE

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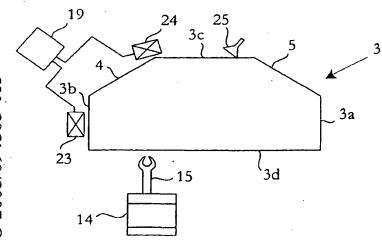
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AF, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, D., IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, S1, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette

(54) Title: ARRANGEMENT AND METHOD FOR DETERMINING POSITIONS OF THE TEATS OF A MILKING ANIMAL



camera pair may be comprised of a pair of thermal or infrared cameras.

(57) Abstract: An arrangement for determining positions of the teats of an animal is provided in a robot-based milking system. The arrangement comprises a camera pair directed towards the teats of the animal for repeatedly recording pairs of images, and an image processing device for repeatedly detecting the teats of the animal and determining their positions by a stereoscopic calculation method based on the recorded pairs of images. The image processing device may he provided to initially determine the absolute position of a teat of the milking animal in a coordinate system of the milking system, and to later determine the position of the teat of the milking animal relative to the robot arm or the teat cup repeatedly, wherein the position of the teat of the milking animal relative to the robot arm or the teat cup is more exact than the absolute position. The

WO 2005/094565 A1